

IN THE CLAIMS

Kindly amend the claims as shown in the following listing of all claims:

1. (currently amended) A prosthetic ankle joint device for articulating segments ~~characterized in that it comprises~~ comprising:

[[-]] a first component (2) having a first articular bearing surface (5), the first component (2) being engaged on a first tibial bone segment (11);

[[-]] a second component (3) having a second articular bearing surface (6) opposite to the first bearing surface (5) of the first component (2), the second component (3) being engaged on a second tarsal bone segment (20); and

[[-]] a third component (4) interposed to the first (2) and the second component (3), having two articular third and fourth bearing surfaces (7, 8) whose individual forms are substantially complementary to said first and second articular surfaces (5, 6) of the first (2) and of the second (3) components, said ~~two~~ third and fourth articular bearing surfaces (7, 8) being freely slidable slidably, both in a sagittal plane and a frontal plane transverse to the sagittal plane, and individually non-captively engaged;

[[-]] said first articular bearing surface (5) and said second articular bearing surface (6) being both shaped not reproducing the natural corresponding shapes of said articulating segments;

[[-]] the first and third (5, 7) and the second and fourth (6, 8) articular bearing surfaces being shaped complementarily and mutually to allow the non-fixed axis of rotation of the articulation to be reproduced while maintaining full congruence.

2. (currently amended) A prosthetic ankle joint device according to claim 1, ~~characterized in that~~ wherein the first and third (5, 7) and the second and fourth (6, 8) articular bearing surfaces are shaped complementarily and mutually to allow the non-fixed axis of rotation of the articulation to be reproduced based on the typical isometric rotation kinematics of some ligament fibers (9, 10) of the natural joint in the unloaded state, therefore optimally designed from the subject-specific geometry of said ligament fibers (9, 10).

3. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device, ~~as claimed in~~ as set forth in claim 1, ~~characterized in that it comprises a~~ wherein the first component (2) ~~having~~ has a generally convex first articular bearing surface (5); ~~a second the second component (3) having~~ has an articular bearing second surface (6) that is generally convex in a sagittal plane and partly concave in a frontal plane; and [a third] the third component (4) ~~having~~ has two articular third and fourth bearing surfaces (7, 8) with front-to-back disposition and with individual shapes that are substantially complementary to said first and second articular surfaces (5, 6) of the first (2) and of the second (3) component, said third component (4) being situated between said first and second component (2, 3) with the ~~two pairs of~~ said complementary ~~surfaces~~ first and third (5, 7) surfaces and said complementary ~~[[-]] fourth and second (8, 6) surfaces~~ coupled in the said freely sliding and individually unconstrained manner.

4. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 1, ~~characterized in that~~ wherein the first articular surface of said first component and the third articular articulate surface of said third component complementary thereto are each shaped partly spherically with equal radii of curvature.

5. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 1, ~~characterized in that~~ wherein the second articular surface of said second component and the fourth articular surface of said third component complementary thereto are each partly anticlastic ~~surface~~ surfaces and have equal curvatures.

6. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 1, ~~characterized in that~~ wherein said first and second ~~component~~ components each present a wholly metallic construction, and said third component is wholly constructed of plastic material.

7. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device (1) for an articulation with non congruent shape between two articular bone segments (11, 20) ~~wherein the first bone segment (11) and the second bone segment (20) have~~ having articular surfaces respectively with individually concave and convex curvatures with greater and lesser radii of curvatures, said device (1) ~~being characterized in that it comprises~~ comprising a first component (2) having a partially spherical convex first articular bearing surface (5) suitable for being anchored to said first bone segment (11) to replace said concave surface; a second component (3) having a second anticlastic articular bearing surface (6) that is convex in a sagittal plane and partly concave in a frontal plane, ~~i.e. partly antielastic~~, and suitable for being anchored to said second bone segment (20) to replace said convex surface; and a third component (4) having two articular third and fourth bearing surfaces (7, 8) in front-to-back disposition, ~~one of said two surfaces,~~ the third surface (7) ~~(7)~~, presenting a partially spherical concave shape with curvature equal to the convex first surface (5) of the first component (2), and ~~the other bearing surface,~~ the fourth surface (8) ~~(8)~~, being a partly anticlastic

surface with curvatures equal to the curvatures of the second articular bearing surface (6) of the second component (3); said third component (4) being interposed to the first (2) and the second component (3), having said two articular third and fourth bearing surfaces (7, 8) whose individual forms are substantially complementary to said first and second articular surfaces (5, 6) of the first (2) and of the second (3) components, said ~~two~~ third and fourth articular bearing surfaces (7, 8) being freely slidably and individually non-captively engaged.

8. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 3 ~~characterized in that~~ wherein each of said components (2, 3, 4) presents a single-piece construction.

9. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device for the human ankle articulation for an articulation of incongruent shape between two bone segments (11, 20) ~~wherein a first (11) and a second bone segments (20) have~~ having articular surfaces respectively with individually concave and convex curvatures with greater and lesser radii of curvature, said device (1) ~~being characterized in that it comprises~~ comprising a tibial component (2) able to be anchored to the tibia (11) and defining a partially spherical convex first articular bearing surface (5); a talar component (3) able to be anchored to the talus (20) and defining a partly anticlastic second articular bearing surface (6); and a meniscal component (4) defining two articular third and fourth bearing surfaces (7, 8) in front-to-back disposition, ~~one,~~ the third surface (7), ~~of said two surfaces~~ presenting a partially spherical concave shape with curvature equal to the convex first surface (5) of the first component (2), and ~~the other,~~ the fourth surface (8), ~~of said two surfaces~~ being a second partly anticlastic surface ~~(6)~~ with curvatures equaling those of said talar component (3); said meniscal component (4) being situated and maintained

between the tibial (2) and talar (3) components, having said two articular third and fourth bearing surfaces (7, 8) whose individual forms are substantially complementary to said first and second articular surfaces (5, 6) of the tibial (2) and of the talar (3) components, said ~~two~~ third and fourth articular bearing surfaces (7, 8) being freely slidably and individually non-captively engaged.

10. (canceled)

11. (canceled)

12. (canceled)

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 3, ~~characterized in that~~ wherein the first articular surface of said first component and the third ~~articulate~~ articular surface of said third component complementary thereto are each shaped partly spherically with equal radii of curvature.

18. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 3, ~~characterized in that~~ wherein the second articular surface of said second component and the fourth articular surface of said third component complementary thereto are each partly anticlastic ~~surface~~ surfaces and have equal curvatures.

19. (currently amended) A ~~prosthesis~~ prosthetic ankle joint device as claimed in claim 3, ~~characterized in that~~ wherein said first and second ~~component~~ components each present a wholly metallic construction, and said third component is wholly constructed of plastic material.

20. (canceled)